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Opacity and the double life of singular propositions

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ABSTRACT

In this paper I analyze David Kaplan's essay "Opacity". In "Opacity" Kaplan attempts to dismiss Quine's concerns about quantification across intensional (modal and intentional) operators. I argue that Kaplan succeeds in showing that quantification across intensional operators is logically coherent and that quantified modal logic is strictly speaking not committed to essentialism. However, I also argue that this is not in and of itself sufficient to support Kaplan's more ambitious attempt to move beyond purely logical results and provide unified, uncontroversial interpretations of both "believes" and "necessarily". In the paper I raise several questions about the subject matter of logic and the role of semantics, with special focus on singular propositions.

1. Introduction

In 1943 Quine published his seminal paper "Notes on Existence and Necessity" where for the first time he dealt extensively with what he dubbed "the question of admission or exclusion of the modalities ... as operators attaching to statements".[1] From Quine's "Notes" David Kaplan's "Opacity" takes inspiration.

Despite the development in the late fifties of the possible-world model-theoretic semantics[2] – which makes many say that Quine's concerns about modal logic have been answered – throughout his career, Quine persisted in his skepticism. David Kaplan's essay "Opacity" can be read as an attempt to go where the model theory cannot reach, to get at the deep roots of Quine's qualms and eradicate them.

In "Opacity" Kaplan individuates two reasons for Quine's skeptical attitude towards modal operators. The first, logical and general, concerns all opacity inducing operators; the second, specific and metaphysical, concerns necessity. Quine's general logical and specific metaphysical charges relate to what Quine dubbed "the third grade of modal involvement".

Kaplan conjectures that at the time of "Notes on Existence and Necessity" Quine was operating at the general, *logical* level. His skepticism toward modality was sustained by an implicit argument meant to prove the inconsistency of quantification across *any* opacity producing operator. In subsequent work,[3] Quine instead presented a *metaphysical* charge specifically directed against modal operators: Commitment to Aristotelian Essentialism.

In [18] ("Three Grades of Modal Involvement", 1953) Quine famously distinguished three different grades of involvement with modal notions. At the first grade of involvement, we only allow for a meta-linguistic predicate of necessity that applies to names of sentences. At the second grade, we make use of an object-language necessity operator modifying closed sentences, as, e.g., in propositional modal logic when we write "$\Box p$". Finally, coming to the third grade, in the context of

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[1] [15, p. 113].

[2] See [3–5] for the initial development of modal logic, and [9,10,13,14] for its early model theory.

[3] See [17] and [18].

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quantified modal logic, we allow the operator to attach to open sentences. With "$\Box Fx$" legitimized, quantification across the modal operator – 'quantifying in' – e.g., "$(\exists x)\Box Fx$", is syntactically well formed.[4]

In "Opacity" [12], Kaplan's reconstruction of Quine's logical and metaphysical criticisms encompasses the two following claims:

The Logical Charge Quantification across an operator is logically coherent only if the operator produces a non-opaque context, viz., one that allows the intersubstitution *salva veritate* of co-referential singular terms.

The Metaphysical Charge Quantified modal logic is committed to essentialism, viz., there is no semantics for quantified modal logic free of commitment to essentialist truths.

In this paper I do not raise the question whether these two charges adequately capture Quine's *interpretive* concerns with the modalities. I have argued elsewhere on Quine's behalf that there are *further* interpretational concerns not captured by Kaplan's formulation of the problem.[5] Presently, my aim is to explore what Kaplan's arguments against Quine's two charges achieve. In so doing we will raise several questions about the subject matter of logic and the role of semantics, with special focus on singular propositions. My conclusion will be that Kaplan succeeds in answering the two charges. He shows that quantification across modal operators is logically coherent and that quantified modal logic is not logically committed to essentialism. However, I will argue that this is not in and of itself sufficient to support Kaplan's more ambitious attempt to move beyond purely logical results and provide unified, uncontroversial interpretations of both belief and necessity.

2. The logical charge dismissed

According to The Logical Charge, quantification across an opaque operator is incoherent. (For brevity's sake, I call "opaque" any operator that produces an opaque context, viz., a context that does not allow the intersubstitution *salva veritate* of co-referential singular terms.) Kaplan reconstructs on Quine's behalf a theorem aimed at proving that a position not open to substitution cannot be occupied by a variable bound to an initial quantifier, external to the opacity inducing operator. Kaplan conjectures that some such logical result must be at work behind Quine's thesis in [15] linking failure of substitutivity to incoherence of quantification in. However, the theorem is fallacious. If the alleged theorem is its ground, Quine's Logical Charge rests on a fallacy.

According to Kaplan, Quine reasoned as follows. Let "$F\_\_$" be an opaque context and "a" and "b" co-referential terms. Assume that "Fa" and "Fb" differ in truth-value. It follows that the occurrences of "a" and "b", in "Fa" and "Fb" respectively, are non-purely referential. Consider then "Fx", with "x" a variable whose value is the referent of "a" and "b". Given the difference in truth values between "Fa" and "Fb", "Fx" under such an assignment must differ in truth value from one of them. Let it differ in truth value from "Fb". Then, the occurrence of "x" in "Fx" is also non-purely referential; hence, not bindable.

The fault, claims Kaplan, lies with the assumption that whenever there is a difference in truth-value between "Ft_1" and "Ft_2", where "t_1" and "t_2" are co-referential, then neither term occurs purely referentially. Instead, all that can be inferred is that at least, and possibly at most, one of the two terms does not occur purely referentially. But then, the occurrence of "x" in "Fx" can still be purely referential and so bindable, despite its position in an opaque context.

Kaplan claims that if Quine is not following the above theorem in deriving the non-pure referentiality of all the singular terms occurring in an opaque context from the sheer opacity of the context, then he must be subscribing to the great classical tradition of Fregean semantics, according to which failure of substitutivity occurs independently from the nature of the substituted terms.

Under the Fregean hypothesis, Quine commits no fallacy. Nonetheless, in such a case, he remains insensitive to the potential different semantic behavior between distinct singular terms in the same context. In a Fregean perspective, contextual opacity in and of itself is seen as sufficient to bar quantification in, *independently* of how terms, and variables in particular, function. The mistake in this case does not so much reside in positing a non-existent linkage between opacity and the non-referential occurrences of terms, but rather in disregarding potential semantic differences between terms in the same context.[6] Kaplan points out that once the semantic characteristics of distinct terms are considered, it can be seen that the same context need not affect all terms in the same way, and that its affecting *some* terms is enough to explain failure of substitutivity, while its affecting *all* terms, or at least all variables, is needed to conjecture incoherence of quantification in.

In his reply to "Opacity" [22], Quine rejects the charge of commitment to the fallacious theorem, and seems to admit to Fregeanism when he says that he has been "position-minded all along".[7] He did not think of opacity in terms of occurrences of terms, but simply in terms of the position in which they occurred.

[4] Cf. [18, pp. 156–157].

[5] See [1].

[6] In "Quantifying In" [11], Kaplan contrasted Quine's 'defeatist' with Frege's 'sanguine' view of occurrences of terms in opaque contexts. That old contrast is not given up by the present assimilation. Inside a generally Fregean framework, according to which context alone determines the behavior of the occurring terms, there is space for sanguine reactions and defeatist attitudes in facing the challenge posed by the ill-behaved operators.

[7] [22, p. 291].

Whether Fregean or not in its motivation, Quine's focus is on the opaque context *itself* and how *it* seems to make quantification in incoherent. We may read into this attitude an interest in the proper interpretation of the operators generating opaque contexts. Quine's concern is that, *interpreted* in a certain way, a belief or necessity context is both opaque and closed to quantification in.[8] In such a scenario, Quine's ban on quantification in is led not so much by a logical argument, but by some general interpretational hypothesis.

Kaplan's interest lies instead in the *technical coherence* of a context that disallows substitutivity while at the same time admitting quantification in. To this end, it becomes crucial to prove not only that the alleged theorem is fallacious, but also that its conclusion is false. What is to be explained is why the coherence of quantification across an operator is independent of the question of the substitutivity *salva veritate* of singular terms in the operator's scope.

Latching on to another grand semantic tradition, Kaplan moves on to impute failure of substitutivity to terms, rather than contexts alone. The gestalt-switch from contextual position to specific occurrences of terms opens up the possibility that different kinds of terms behave differently in the same linguistic environment.

Making use of what he sees as the key feature of Russellian semantics, singular propositions (or their linguistic counterparts, valuated sentences), Kaplan argues for the technical feasibility of quantification into opaque contexts. Just as singular propositions are made up of intensional entities and plain objects, valuated sentences contain words and plain objects. If the sentence "*Fa*" expresses a singular proposition, then the corresponding valuated sentence is like "*Fa*", except that it contains the object *a* in place of the term "*a*". Alternatively, we may think of the valuated sentence as the singular proposition *that Fa*, except that it contains the linguistic predicate "*F*" in place of the intensional attribute *F* (keeping in mind that the same singular proposition may correspond to more than one valuated sentence, if different predicates express the same attribute). Valuated sentences serve the purpose of showing that Quine can be rebutted with no employment of suspicious intensional entities. Kaplan claims that despite the apparent sensitivity of opaque contexts to something other than just the referents of singular terms, all that matters for quantification – even across an opaque operator – are the terms' referents.

It is perhaps tempting to look at these matters in the following way: We first distinguish with Russell, *pace* Frege, between directly referential and non-directly referential singular terms; then we conjecture that in opaque contexts substitutivity fails for the non-directly referential terms, given the contexts' sensitivity to the way in which the referent is provided. However, directly referential terms have no *way of* providing a referent for these contexts to detect. Hence, they behave there the way they always do: they just contribute an object to the proposition expressed. Being (the paradigm of) directly referential terms, variables under an assignment of values simply refer to their assignments.[9] This is enough to secure both that directly referential terms can be bound to an external quantifier, and that they can be substituted *salva veritate*.

This picture however cannot be correct. Substitutivity *salva veritate* may, and indeed does, fail in some opaque contexts for directly referential terms, indeed for variables too. For example, it may be held that Ralph may believe that Ortcutt is a spy, without also believing that Bernard is a spy, despite the direct co-referentiality of "Bernard" and "Ortcutt". Someone may say "*Fx*" without saying "*Fy*". Between quotes, even variables cannot be freely interchanged. Hence, the sweeping suggestion that Russellian directly referential terms can only occur purely referentially seems wrong.

The best course for Kaplan is to appeal to singular propositions, with no need to sort out which kinds of terms, if any, contribute to their expression. According to Kaplan, the key feature of Russellian semantics consists in envisioning singular propositions, not in classifying terms one way or the other. This means that questions concerning the interchangeability of co-referential terms are to be kept apart from questions of quantification. The coherence of quantifying across an operator is independent of the question of substitutivity *salva veritate* of singular terms in the operator's scope. Failure of substitutivity depends on terms. Quantification in is enabled by the sheer metaphysical availability of singular propositions. The appeal to singular propositions is sufficient to prove that the conclusion of the theorem, according to which a variable in a context closed to substitution is not bindable, is false. Quine's (alleged) Logical Charge is thereby dismissed.

3. The unified interpretation

After dismissing Quine's Logical Charge, Kaplan makes a general interpretive proposal according to which unified, unambiguous readings of opaque operators are sustainable despite the coherence of quantification in and the failure of substitutivity. Kaplan's positive general interpretive conjecture is as follows:

The Unified Interpretation Thesis Given that quantification across opaque operators is coherent, we need not assume that opaque operators are lexically ambiguous. Singular propositions can be employed in the provision of a unified interpretation.

Because of his strictures against quantifying in, Quine famously distinguished between two different interpretations of opaque operators: notional and relational.[10] (Not all opaque operators have the double reading, for example Quine never envisioned a relational sense of quotation.)

[8] I follow Kaplan in focusing just on belief. However, my remarks are meant to apply to the so-called "propositional attitudes" in general.

[9] Cf. [12, pp. 235–236] where this kind of picture is suggested.

[10] See especially [19] for belief, and [21] for necessity.

In the notional sense, an operator is fully opaque: it allows neither substitutivity nor quantification in. On the other hand, relationally interpreted, an operator is fully transparent: it allows both substitutivity and quantification in.

In the notional sense, an intentional operator[11] expresses a dyadic relation that holds between a subject and a proposition (or a sentence); in the relational sense instead it expresses a multiple (at least triadic) relation between a subject, an object of the attitude, and what is 'attitudinized' of it. For instance, in the notional sense, propositions or sentences are the objects of belief; in the relational sense, a predicate or property is believed of something, i.e. something is believed to be such and such. Similarly for necessity: in the notional sense, necessity is attributed to propositions or sentences; in the relational sense, it is a way of relating objects to attributes or predicates.

Against Quine's postulated ambiguity, Kaplan strives to provide a unified interpretation. As he points out, technically the result is easily obtained by just allowing re-ambiguation of the alleged ambiguous operators. If there really are two senses of necessity or belief, we can use one word to express both, as we have always done so far. We can then disambiguate the re-ambiguated operator according to whether substitutivity and quantification in are both allowed or both rejected.

Yet Kaplan acknowledges that if what we want to achieve is real unification, not just re-ambiguation, we need *semantic* unification and not just "syntactic reorganization". We aim at one unified notion of necessity (and belief) that genuinely allows for quantification in *despite* failure of substitutivity.

It is thanks to singular propositions that Kaplan rejects Quine's distinction of the notional and the relational. Kaplan has no sympathy for lexical ambiguities, when we can do without them, thanks to logical acumen and the new Russellian entities. He claims that (i) there is only one sense of necessity or belief, (ii) it makes sense to quantify across a necessity or belief operator, and (iii) it is nonetheless still the case that substitutivity may fail because of how the terms to be substituted function.

The appeal to singular propositions allows Kaplan to posit no *syntactical* difference between the alleged relational and notional senses of the operators. They always express relations to propositions or sentences. "Necessarily", for example, can always be taken as a sentential operator, and never as an adverb (predicate-modifier). To achieve *semantic* unification, Kaplan needs to impute Quine's alleged lexical distinction between notional and relational readings of the operators to a difference in the propositions they operate upon. Kaplan uses the distinction between general and singular propositions to explain the intuitive distinction that Quine thought called for a lexical ambiguity.

In this way, the superficial syntactical uniformity is accompanied by deep semantical unification. There is no lexical ambiguity: only one monadic sense of "necessarily" and only one dyadic sense of "believes" that take both general and singular propositions as their objects. For example, Quine's notional beliefs have general propositions as their objects. Quine's relational beliefs instead are beliefs in singular propositions. Similarly for necessity; and insofar as the new entities, singular propositions, are unified with general propositions, a genuinely unified interpretation has been achieved.

3.1. The metaphysics of belief

The question we must consider is then the following: Are singular propositions really one of a kind with their general counterparts? To address this question, let us first consider Quine's understanding of the relational interpretation of the opaque operators, particularly belief.

Concerning the Quinean relational interpretation of belief, it must be noticed that it corresponds to Russell's thesis in *The Philosophy of Logical Atomism* [24] that intensional operators do not take propositions as their objects. Russell's question is "What is the form of the fact which occurs when a person has a belief?"[12] For Russell this is a logical question, insofar as logic "is concerned with the forms of facts, with getting hold of the different sorts of facts, different *logical* sorts of facts, that there are in the world".[13] The thesis then is ultimately metaphysical, as Russell himself says when he points out that he pursues logic "[i]n accordance with the sort of realistic bias that I should put into all study of metaphysics."[14] The question then is about the metaphysics of belief and in particular the proper object of belief: "I am talking of the actual occurrence of a belief in a particular person's mind at a particular moment, and discussing what sort of a fact that is."[15]

At the time of [24] Russell does not believe in the existence of propositions, whether general or singular, in addition to facts. He also does not believe in the existence of false facts. So he claims that the objects of belief are neither propositions (there aren't any!), nor facts, because false beliefs would then have no object at all and we must provide a unified account of belief independently from the truth or falsity of what is believed. Thus, when Othello believes that Desdemona loves Cassio, Othello is not related to some metaphysical unity comprising Desdemona, 'loves', and Cassio all together. He is related to the three of them separately taken.[16]

When Quine distinguishes notional from relational beliefs he seems to have in mind the Russellian 1918 view of belief as relational and the Fregean view as notional. According to Frege, beliefs are relations to thoughts, and Fregean thoughts

[11] Intentional operators express psychological attitudes and are one kind of intensional operator.

[12] [24, p. 81].

[13] [24, p. 80].

[14] [24, p. 80].

[15] [24, pp. 80–81].

[16] 'Loves' rather than love, because Russell emphasizes that the subordinate verb contributes to the belief something of quite a different, i.e. predicative, nature from Desdemona and Cassio.

can be assumed to be akin to general propositions. Of course, in order to propose the distinction Quine need not think that in reality there are these two different sorts of beliefs. He is simply pointing out that there are two distinct views on the metaphysics of belief and that they have opposite semantic consequences.

Notice moreover that *two* key features distinguish the notional from the relational account, and that these features need not go hand in hand. The first concerns the *unity* or lack thereof of what is believed. The second concerns the *representational* nature of beliefs. According to Frege, thoughts are the objects of belief, and they are both real unities and representational entities.[17] Instead, according to Russell's [24], the objects of belief are neither representational nor unified.

Clearly, when Kaplan proposes that the relational be treated on the model of the notional with a singular proposition as its object he is proposing a very different view from Russell's and Quine's. He is in effect advocating the thesis that the proper object of belief be both unitary and representational:

> Quine saw how Frege's intensional ontology ... explained opacity and rejected quantification. He also showed us how the familiar ontology of linguistic expressions can do the same. I have aimed to describe modifications to the two ontologies which allow them to accept (and even to explain) quantification while leaving intact the prior explanation of opacity. Each modification involves two steps of unification: first, the unification of individual and property (or predicate) by enlisting, or creating, a new kind of entity containing individuals, and second, the assimilation of the new entities to the old. *The success of my project – to achieve conceptual coherence – depends on the degree to which each step seems natural.*[18]

Whether intensional (singular propositions) or linguistic (valuated sentences), the objects of relational beliefs are to possess a real unity between the subject and the predicate. This requirement falls squarely within the Fregean tradition of searching for a real unity of thought.[19] Paradoxically, Kaplan uses Russellian propositions to fight against the Russellian multi-relational view of belief, and to extend the Fregean treatment to the singular case.

Additionally, the unification between general and singular propositions must also be natural. But then the new entities must be representational too, if the old ones are. Either general and singular propositions are both fact-like entities, for example states of affairs, in a genuine Russellian spirit, in which case neither is representational; or they are both thought-like entities in a Fregean spirit according to which intensional entities are fundamentally representational. I conjecture that in Kaplan's view all propositions are fundamentally representational, given that they are meant to serve the same purpose of their verbal counterparts, valuated sentences.[20]

I see Kaplan's project as subject to a tension. At this juncture, we face a dilemma. Suppose we grant the affinity of singular and general propositions. Then Kaplan has indeed achieved a unified interpretation. However, he has achieved it by reducing Quine's original relational interpretation to a limit case of the notional. Kaplan's view in "Opacity" [12] is not substantially different from his previous view in "Quantifying In" [11]. In [11] he accounted for the *de re*, that is the relational, by appealing to a special subclass of expressions which are intersubstitutable *salva veritate* even in opaque contexts. He had then made recourse to standard names, like numerals for numbers, to explain relational necessity, and to vivid names to express relational belief.[21] He is now moving beyond names thanks to singular propositions.

There are some differences, of course. At the time of "Quantifying In", standard names were seen both as providing a way of understanding *de re* necessity, but also as automatically making true some essentialist claims concerning those entities that have standard names. Now, with directly referential names in place of standard ones to effect the reduction of the *de re* to the *de dicto*, we get a way of understanding essentialist claims which does not commit us to *any* particular extension of essentialist truths. Nine *qua* "nine" was necessarily the successor of eight, because of the properties of *numerals*; but nine *qua* itself – discharging the duty of self-representation in a singular proposition – leaves space open to settle the question any way desired.

But if propositions are ultimately representational entities, any account of opaque verbs and operators that takes them as their objects is notional. If this is the case, Kaplan's use of singular propositions provides indeed a unified account, but not of the right phenomena and, in so doing, it obscures the distinctive features of the relational.

According to the other horn of the dilemma, we may question the adequacy of singular propositions as (i) real unities and (ii) representational entities. Hence, we may grant to Kaplan that the readings he aspires to unify are indeed the intended Quinean ones. However, if all that the unity of a singular proposition amounts to is some form of set-theoretic unity, as when we think of singular propositions as mathematical sequences, we are far away from the real unification that genuine facts and thoughts require. Moreover, if the plain objects in singular propositions are unable to discharge representational duties, the semantic unification of the relational with the notional remains a logician's trick with no intuitive, conceptual support. As Quine points out, singular propositions as sequences of entities are ontologically unobjectionable. Of a kind with the traditional, general, representational propositions however they are not.

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[17] See [6].

[18] [12, p. 285], emphasis mine.

[19] But see also Russell, "A proposition, in fact, is essentially a unity ... no enumeration of constituents will restore the proposition" [23, p. 50].

[20] Moreover, in later still unpublished work Kaplan has coined the slogan "No mentation without representation" to voice the requirement that the objects of thought be representational entities.

[21] I trust that my general point is clear enough for the purpose at hand, with no need to elaborate on standard and vivid names.

In linguistic terms – making use of valuated sentences rather than propositions – the dilemma runs as follows. To unify the two interpretations, valuated sentences (sentences containing non-linguistic objects as well as words) must be just that: *sentences*. Even if in some new and stretched sense, they must still be linguistic entities. Kaplan tells us that not all parts of sentences need be words. The ontology of sentences has been expanded to include valuated sentences, however something must be preserved to assimilate the new entities to the traditional ones. A plausible suggestion is that the non-linguistic object in the sentence (the value) is there to discharge the duty of *self-representation*. But then the object in the sentence is there in place of itself rather than being simply present. It is used rather than mentioned.

If, on the other hand, valuated sentences are too hard a *dictum* to digest and the *relational* remains free of representational features, as Russell and Quine meant it to be, then no unification has been achieved. The non-linguistic object in the sentence has no representational powers and Kaplan's new sentences are fundamentally different from traditional ones. Valuated sentences are of a different kind from ordinary sentences, and in some perhaps parochial but surely defensible sense, not sentences at all. I think this last might have been Quine's opinion:

> [T]he resulting analysis does not strike me as more natural than what was afforded by Kaplan's old footnote and "Intensions Revisited." Perhaps its added virtue lies rather in accommodating unspecifiable objects.[22]

Let me now raise a parenthetical question. If we endorse Kaplan's open-minded ontology of sentences, what prevents us from stretching the notion of sentence to the point of envisioning sentences containing no linguistic components at all? Lacking a principled reason to stop this move – some justified, non-*ad hoc* stricture demanding the presence of at least one old-fashioned piece of vocabulary for an entity to count as a sentence – what stops us from calling any old fact a sentence? But then aren't we just equivocating? Or are we rather introducing a new (quasi-)symbolic system?

To conclude, if singular propositions are assimilated to general propositions they help provide a unified account, but of two sides of the same phenomenon, we might call them "the singular notional" and "the general notional". If instead singular propositions are assimilated to the relational, this way of representing the relational ('*sub specie propositionis*', so to speak) represents a logician's trick, a clever superficial unification of what is at heart disparate.

3.2. The role of semantics

We have seen that Russell's project was metaphysical: to figure out the logical structure of facts of belief. However it is not clear that Kaplan's project is of the same sort. This emerges in part XI of [12] which is devoted to methodology. Kaplan gives reasons to reject the syntactic transformation of sentential operators into predicates and of their sentential complements into names (of propositions). He says,

> To the degree to which we regard our semantical methods as model-making (i.e., as a way of analyzing the notion of logical consequence for the object language) rather than as reality-describing (i.e., as analyzing the intended interpretation), fine-tuning the object language to bring it into conformity with our model may end up institutionalizing an artifact of the model that corresponds to no aspect of reality ... Model-making, by helping to articulate structure, can help to make it more acceptable that there is a reality behind questioned linguistic forms. (For example, that there *is* relational belief or even that there are singular propositions.) But one can accept the linguistic forms and the logic induced by the model, without thinking that there must be 'hidden' aspects of the reality that correspond to unexpressed structural features of the model. In particular, the very ontology of the model, whether propositions, possible worlds, or [valuated sentences], need not mirror any aspect of the reality expressed ...[23]

Kaplan's methodological sermon places his semantical project as distant as possible from both Frege's and Russell's. To the degree to which Kaplan regards his semantical project as model-making, his aim is simply to show that "quantification into opacity" is not strictly speaking incoherent. As artifacts of the model, propositions – singular as well as general – need not be taken with any great metaphysical seriousness. The logical coherence of "quantification into opacity" that Kaplan defends has nothing to do with the reality of facts of belief or necessity. We are very far from Russell's understanding of logic as a branch of metaphysics concerned with the real structure of actual facts, like your present belief that today is Tuesday.

It must be acknowledged that by means of singular propositions, whether real or simple model-theoretic artifacts, Kaplan has surely secured his *logical* point: quantification into opaque contexts is not incoherent. The answer to this question however does *not* depend on whether singular propositions (i) possess real internal unity or are just mathematical sequences, and (ii) are really similar to general propositions. Artificially or naturally, the technical result is secured. But insofar as Kaplan is attempting to move beyond semantics as model-making to semantics as the provision of the intended interpretation, we need only remember his own words: "The success of my project – to achieve conceptual coherence – depends on the degree to which each step [of unification] seems natural".

[22] [22, p. 292].
[23] [12, p. 246].

4. The metaphysical charge

After the rebuttal of the Logical Charge, Kaplan moves on to defuse Quine's Metaphysical Charge, according to which quantified modal logic is committed to essentialism, i.e., to an invidious attitude towards the attributes of a thing, whereby some are regarded as essential, others as accidental. Kaplan rebuts this second charge by showing that quantified modal logic is at most committed to a benign, i.e., logical, form of essentialism which, roughly put, necessitates only logical attributes. Kaplan extracts this benign notion of logical necessity from the models of first-order logic (with identity and descriptions). Bracketing aside questions of iteration of the modal operators, the task is to find a way of classifying which first-order sentences (including valuated sentences) are (logically) necessary. Kaplan's answer is: those that are true in all the first-order models, i.e., logically true.

By extension of the notion of logical truth from closed to open sentences, an open formula is logically true (under an assignment of values to its variables) if it is true (under that assignment) in all models. But logical truth is not invidious: if a formula is logically true under an assignment of values to its variables, it remains such under an isomorphic assignment. This is Kaplan's principle of *the fungibility of individuals*, which again refutes any essential predication of individuals, except for the benign logical form of essentialism, e.g., that Socrates is necessarily self-identical or red-or-not-red.

From this kind of anti-essentialist first-order model theory, Kaplan 'reads off' an interpretation of a *logical* necessity operator "$\Box$". "$\Box$" embraces (the necessitation of) logical truths. Insofar as individuals are involved, the operator verifies only essentialist claims of the benign, non-invidious, kind, e.g., the above "Socrates is self-identical" and "Socrates is red-or-not-red."

Kaplan suggests that if Quine's problem was invidious essentialism of the Aristotelian kind, then he should be happy with the logical interpretation of necessity he offers. He conjectures that Quine may not have been aware of how to extend the benign notion of logical truth (hence, logical necessity) to valuated sentences. This oversight made him misjudge quantified modal logic as being committed to an abandonment of benign logical essentialism. Quine wrongly thought that no logical criterion to distinguish between essential and accidental predications was forthcoming. Once again, singular propositions or valuated sentences serve Kaplan well in defusing Quine's third-grade concerns. They were employed to legitimize quantification into opaque operators, and are now used to extend to open sentences a benign notion of logical necessity that makes no use of linguistic surrogates.

Kaplan speculates that Quine wrongly conjectured that a *de dicto* translation of *de re* modal claims had to make use of verbal or conceptual surrogates of objects, namely that we can only make sense of necessity as applied to objects under a name or description, not directly. But in so doing, we inevitably introduce a distinction between terms that recapitulates at the linguistic level the invidious Aristotelian distinction between essential and accidental properties – something like a distinction between essential and accidental names.[24]

Quine however had explicitly made it clear that this is not his concern when he addressed a similar remark of Kripke's:

> [T]his kind of consideration is not relevant to the problem of essentialism because one doesn't ever need descriptions or proper names. ... The distinction between proper names and descriptions is a red herring. So are the tags.[25]

Rather than conjecturing with Kaplan that Quine is surrogate-minded, I claim on the contrary that Quine's concern about essentialism strikes exactly because *no use of surrogates* is assumed. The use of surrogates to make sense of the *de re* reduces the *de re* to the *de dicto* and does not really provide the intended reading of the *de re* idioms. On the other hand, a real *de re* interpretation of modal discourse makes no use of surrogates, and forces an attribution of modal properties directly to objects. *This* is essentialism in Quine's eyes (though it may still be benign in Kaplan's sense of necessitating only logical attributes). Thus, I conjecture that Kaplan and Quine use the term "Essentialism" in different senses. For Kaplan, Aristotelian Essentialism is mainly a matter of *extension*: it consists in necessitating more than just logical attributes. For Quine instead, Aristotelian Essentialism consists in accepting a *direct* modal attribution of predicates to objects, no matter how logical or pure the predicates being attributed are.

Kaplan shows the coherence of his own logical interpretation of the modal operators, and demonstrates how to extend this logical interpretation of necessity to quantified modal discourse by extending the notion of logical truth to open formulas under an assignment of values, that is to valuated sentences. In so doing, Kaplan claims to have cleared the third grade of modal involvement of the charge of invidious essentialism.

I take Quine to have recognized the compatibility of the logical reading of the modal operators and quantification in. Quine however suggests that, despite its consistency and benignity, the logical interpretation of necessity is not the intended one:

> We turn then to essentialism. I accept the notion of logical truth, as Kaplan observes. I accept it in an epistemologically innocent way, on a par with chemical truth, economic truth, and ornithological truth; it is merely a question in each case of what expressions occur essentially rather that vacuously. When we modalize logical truth into logical necessity by

[24] K. Fine shares this interpretation in [7] and [8].
[25] [20, p. 140].

> shifting from a predicate of sentences to an operator on sentences, essentialism supervenes. It is a benign essentialism, Kaplan urges, in that whatever is essential to one object is essential to all. There is no gainsaying its benignity, as essentialism goes. The same could be said of a modal logic based not on logical necessity but on its chemical, economic, or ornithological analogue. Most of the interest that modal logic has commanded, however, hinges rather on a notion of metaphysical necessity ... and this course is committed to invidious essentialism, as Kaplan calls it, in which an essential trait of one object can be an accident of another. Moreover, it is this pattern, rather than the benign one, that I see as useful and customary in daily discourse, though only meaningful in context.[26]

Whether Quine is right or not about the *intended extension* of true essential predications, a deeper problem needs to be addressed. The question is whether the *intended interpretation* of a sentence like "Socrates is necessarily human" or even "Socrates is necessarily red or not red" is that the singular proposition that Socrates is red or not red is necessarily true. If the intended interpretation of *de re* (i.e., relational) modal idioms is instead multi-grade, as in the case of belief, we need to make sense of the notion of a property applying essentially to an object. The fact that the property selected is logical, like 'red or not red', is not in and of itself sufficient to make sense of the notion of essential, *or even logical*, predication.

5. Logical truth and logical satisfaction

As seen, Kaplan's specific positive proposal consists in putting forward a non-essentialist, logical reading of the modal operators and arguing for its compatibility with quantified modal discourse. This is Kaplan's positive conjecture:

The Logical Necessity Thesis Quantified modal logic is consistent with a logical, non-essentialist interpretation. To provide such an interpretation, it is sufficient to make sense of logical truth for singular propositions.

Quine's third-grade concerns regard the interpretation of quantified in modal sentences, under the standard objectual interpretation of the quantifiers and a semantical interpretation of the modal operators – interpreted as representing at the object level some meta-linguistic property of sentences. Quine thought it nonsensical to say of an object that, independently of any characterization, it bears a property analytically.[27] Kaplan has shifted the debate from analyticity to logical truth. Thus, the question to be addressed becomes whether is makes sense to say of an object that it bears a property logically. In other words, does the clarity of the notion of logical *truth* guarantee the clarity of a corresponding notion of logical *predication*?

Roughly speaking, Kaplan interprets the idea of an object being logically F in terms of the object's logically satisfying F, and this last is understood in terms of the logical truth of the singular proposition containing the object itself and the property F. Additionally, to make sense of the logical truth of singular propositions or valuated sentences, Kaplan relies on finding a corresponding general, closed sentence that is logically true just in case the valuated sentence is.[28] In so doing, I will argue, the notion of logical predication is explained away (reduced to some other notion), rather than explained.

An analogy with Kaplan's operator **Says-quote** will help to clarify my concern. Kaplan considers the possibility of introducing an operator **Says-quote** to replace the predicate "says" of direct discourse. According to the proposal, the quotes of direct discourse are incorporated into the operator. This transforms

(i) Ralph says "Ortcutt is no spy"

into

(ii) Ralph **says-quote** Ortcutt is no spy.[29]

Once the quotes have been incorporated into the operator, we may be tempted to quantify in and thus produce

(iii) $(\exists x)$ Ralph **says-quote** x is a spy.

According to Kaplan, the reasonable view on such an operator maintains that no valuated sentence falls into its extension, i.e., it regards (iii) and its kin as always false, despite their "model-theoretic intelligibility."[30]

In the case of the operator of logical necessity, a similar point holds. In that case, Kaplan concedes that some valuated sentences do indeed fall into the extension of the operator, e.g. "**OBJECT** is red or not red", however the operator would be equally (model-theoretically) intelligible even if no valuated sentence fell into its extension and, in general, no matter what its extension might be.

[26] [22, p. 292].
[27] See Quine [15] and [16], also Ballarin [2].
[28] Cf. [12, p. 251].
[29] Cf. [12, pp. 247–248].
[30] [12, p. 247].

Even so, I wish to raise the question of the *real* intelligibility of **Says-quote**, independently of its model-theoretic intelligibility. Granted its clear model-theoretic semantics, can we really *make sense* of "($\exists x$) Ralph **says-quote** x is a spy"? It seems to me that, its clear model-theoretic semantics notwithstanding, no natural understanding of "($\exists x$) Ralph **says-quote** x is a spy" is forthcoming. To judge with Kaplan that no valuated sentence can ever be said is not enough to make sense of what saying such a sentence could possibly consist in. Of course, we can stipulate that "($\exists x$) Ralph **says-quote** x is a spy" is true just in case there is a term "a" such that "Ralph **says-quote** a is a spy" is true, that is just in case "Ralph says 'a is a spy'" is true. This reduction however offers no relational interpretation of **says-quote**.

I suggest that Quine's view about the logical operator of necessity may well be similar to my view of **Says-quote**. We can surely provide a clear model-theoretic semantics and settle the question of which singular propositions fall in its extension, nonetheless no clear, non-reductive sense has been made of quantification across it. Logical coherence falls short of conceptual coherence.

To make sense of quantification across **Says-quote** we need to explain what counts as **Saying-quote** of something that it is so-and-so. Similarly, to explain how an object can bear a property of logical necessity we need to explain nothing less than exactly this: how it can indeed bear a property in such a way. The proposal that it does so in case a certain singular proposition is logically true doesn't render the logical bearing of a property in and of itself intelligible. A non-reductive explanation of logical predication has to explain what it is for an object to bear a property logically.

Similarly, as we have seen, the appeal to singular propositions in and of itself does nothing to explain the alleged phenomenon of *de re* belief. Those who claim that Quine's notion of *de re* belief makes no sense gain no insight on the notion when told that to have a *de re* belief is to believe a singular proposition. The question instead becomes: What does it mean to believe a singular proposition? An explanation of *de re* belief cannot escape the task of explaining what it means for an object in and of itself, independently of any characterization, to be believed to be something or other. Any explanation of the phenomenon ultimately appealing to beliefs in some corresponding general propositions would be fundamentally reductive and *de dicto*.

6. Conclusion

In this paper, I have analyzed Kaplan's reply to Quine's qualms about quantification into opaque contexts. In particular, I have focused on Kaplan's employment of singular propositions for this task. Kaplan uses singular propositions as a model-theoretic tool to show that (i) quantification across opaque operators is not incoherent and that (ii) we can endorse a logical notion of necessity that necessitates only logical truths, including singular ones.

However, I have argued that if our interest lies in the intended interpretation of quantified in modal or intentional idioms, the simple appeal to singular propositions is not sufficient to provide a unified interpretation of relational and notional readings of opaque operators. This has emerged clearly in the case of belief, where it seems that there is nothing in common between a notional account of belief according to which the proper objects of belief are single, unified thoughts, namely general propositions understood as representational entities, on the one hand, and a relational account according to which the objects of thought are neither internally unified nor representational, on the other.

Similarly, classifying singular propositions as necessary in case they are logically true (ultimately by taking properties to be logical in case they apply universally) does indeed provide an extensionally non-controversial version of essentialism. Nonetheless, I have argued that such a reading does not by itself qualify as a relational interpretation of the modal operators. Relationally interpreted, necessity is a mode of predication, not of truth. A relational interpretation of logical necessity has to make sense of the notion of logical predication.

My sense is that Kaplan's philosophical temperament is very much at odds with Quine's. When Quine pointed out some trouble-making idioms, Kaplan immediately set out to find a way to reduce the controversial to the non-controversial. He did so in a genuine Carnapian, explanatory spirit. However, in this way Quine is impossible to please, because he is not looking for a way out of the problem. For him, no light is thrown on a problem by showing how to sidestep it.

In conclusion, I would like to suggest that perhaps the deepest disagreement between Kaplan and Quine is on the central task of semantics. Kaplan seems to conceive of it as a branch of logic, whose main task is "to analyz[e] the notion of logical consequence for the object language." Quine's interest lies instead in the intended interpretation of our language. As such, semantics cannot and should not be kept apart from metaphysics, given that, as Kaplan says, to analyze the intended interpretation is to describe reality.

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